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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,392	03/23/2004	Osamu Takagi	016907-1652	2346
22428	7590	07/14/2005	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			LEUNG, PHILIP H	
			ART UNIT	PAPER NUMBER
			3742	

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/806,392

Applicant(s)

TAKAGI ET AL.

Examiner

Philip H. Leung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7-14 & 11-04-04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The drawings filed on 3-23-2004 are acceptable.
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
4. Claims 1, 7, 9, 10 and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Waggott et al (US 4,891,484).

Waggott shows an induction heating comprising: a coil unit (3, 4) which holds a coil (5, 6) having a predetermined number of turns; a coil assembly (1 and 2; or 3 and 4) which includes at least two coil units; and a heating member (100) which generates heat by an eddy current upon a change in a magnetic field generated by an induction heating coil of the coil assembly. The preamble “fixing device” is only an intended use without any specific structure requiring more than heating and adds patentability weights as Waggott can be used for the same.

Similarly, in regard to claim 9, Waggott shows an induction heating apparatus comprising a coil unit (3, 4) which holds a coil (5, 6) having a predetermined number of turns; a coil body (1, 2) which includes at least two coil units and includes an induction heating coil (5, 6) formed by a plurality of series- or parallel-connected coils; a coil assembly (the entire heating assembly as

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shown in Figures 1, 3 or 4) which includes at least two coil bodies; a heating member (100) which generates heat by an eddy current upon a change in a magnetic field generated by the induction heating coil; and a power supply mechanism (not shown but inherent for operation) which supplies high-frequency power to the induction heating coil (see Figures 1-4 and col. 2, line 32 – col. 3, line 4).

5. Claims 1 and 7 are further rejected under 35 U.S.C. 102(b) as being anticipated by Okabayashi et al (US 5,822,669).

Okabayashi shows a fixing device comprising a coil unit (12 as shown in Figure 3) which holds a coil (22) having a predetermined number of turns; a coil assembly (24 as shown in Figures 4 and 5) which includes at least two coil units; and a heating member (10) which generates heat by an eddy current upon a change in a magnetic field generated by an induction heating coil of the coil assembly.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 2-6 are rejected under 35 U.S.C. 103(a) as being obvious over Okabayashi et al (US 5,822,669), in view of Takagi et al (US 2003/0002882 A1).

As set forth above, Okabayashi shows every feature except for the exact arrangement of the coil units. Takagi shows an induction fixing device including a coil assembly 12 with a plurality of coil units (Figures 4B, 7A, 7B and 9A, B and C) for heating a heating roller 11. For instance, 71a is the claimed first coil unit and 71b and 71c are the claimed second coil unit. See Figure 1-9 and col. Paragraphs [0048] –[0121]. It would have been obvious to an ordinary skill in the art at the time of invention to modify Okabayashi to arrange the coil assembly with the central two units as the first coil subassembly and sandwiched by the end units as the second coil subassembly for better heating result of the heating roller to achieve more uniform fixing result, in view of the teaching of Takagi. The exact structure would have been a matter of engineering expediency depending on the exact dimensions of the heating roller and the heating characteristic of the image material being heat-fixed and can be easily determined through routine experimentation by an ordinary artisan.

8. Claims 9-21 are rejected under 35 U.S.C. 103(a) as being obvious over Okabayashi et al (US 5,822,669), in view of Waggott et al (US 4,891,484).

As set forth above, Okabayashi shows every feature except that the four coil unit are supported together as a single assembly. Waggott shows an induction heating apparatus comprising a coil unit (3, 4) which holds a coil (5, 6) having a predetermined number of turns; a coil body (1, 2) which includes at least two coil units and includes an induction heating coil (5, 6) formed by a plurality of series- or parallel-connected coils; a coil assembly (the entire

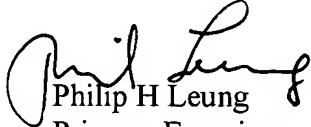
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heating assembly as shown in Figures 1, 3 or 4) which includes at least two coil bodies (see Figures 1-4 and col. 2, line 32 – col. 3, line 4). It would have been obvious to an ordinary skill in the art at the time of invention to modify Okabayashi to form the coil units in two subassemblies so that the heating can be arranged from above and below the heating member such as a heating belt 500 (as shown in Figure 24A), for more efficient and uniform heating result, in view of the teaching of Waggott. In regard to claim 16, Waggott also shows the core for the coil units includes a plurality of grooves 13 for coil windings and power connection (see Figure 5 and col. 3, lines 10-14). The exact structure would have been a matter of engineering expediency depending on the exact material being heated and can be easily determined through routine experimentation by an ordinary artisan.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip H Leung whose telephone number is (571) 272-4782.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 472-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Philip H Leung
Primary Examiner
Art Unit 3742

P.Leung/pl
7-10-2005